

Patent claims

1. An erasing and cleaning apparatus for cylindrical surfaces, in particular of printing form and blanket cylinders of a printing press, having a cleaning cloth which can be moved by cleaning cloth transport means held in a positioning unit which has side walls, the cleaning cloth transport means comprising a clean cloth roll, a wash roll and a dirty cloth roll, and in which an intermittently operated drive is provided for advancing the cleaning cloth in such a way that the dirty cloth roll can pull the cleaning cloth off the clean cloth roll over the wash roll step by step and can wind it up forming increasingly large winding radii, characterized in that the intermittently operated drive acts via at least one of the bearing elements (2, 3, 4) in one of the side walls (1) of the positioning unit by means of a pneumatically or hydraulically driven linear drive (5) which has a limited stroke and whose stroke movement can be converted into an intermittent rotational movement by a gear wheel (10) placed on the bearing element (4) with a freewheeling or overrunning clutch, the stroke limitation of the linear drive (5) being controlled by means of a cam control system (13, 14), which can be adjusted in a variable manner as a function of the changing winding radii of the dirty cloth roll, and an integrated braking device (23 to 28) being provided which counteracts the pulling direction of the dirty cloth roll and can be adjusted in a variable manner as a function of the changing winding radii of the dirty cloth roll.

2. The erasing and cleaning apparatus as claimed in claim 1, characterized in that the gear wheel (10) is placed concentrically onto the bearing element (4) for the dirty cloth roll in order to incorporate the intermittently operated drive, a gear wheel rod (12) is pivotably mounted in an approximately tangential position with respect to the circumference of the gear wheel (10) on the linear drive (5) by means of a guide rod (11), the gear wheel rod (12) is situated in clear contact with a guide surface of the linear drive (5) and meshes with the gear wheel (10) on the bearing element (4).
3. The erasing and cleaning apparatus as claimed in claim 2, characterized in that a stroke limiting stop surface (13) is provided for the gear wheel rod (12) at the end which is remote from the guide rod (10), and the gear wheel rod (12) can be moved transversely against a movably arranged stop cam element (14) of the cam control system (13, 14) in order to limit the stroke.
4. The erasing and cleaning apparatus as claimed in claims 2 and 3, characterized in that a small wheel (6) rolling on the cleaning cloth on the dirty cloth roll can be moved transversely by means of a guide rod (7) in accordance with the changing winding radii, and a further rack (15) which meshes with an intermediate gear wheel (16) is assigned to the guide rod (7) in clear contact with it, the intermediate gear wheel (16) converting its rotation into a linear movement again via a third rack (17) and driving a gear

wheel chain (18), in order thus to displace the stop cam element (14) via a corresponding meshing point in a plane which is perpendicular with respect to the direction of movement of the rack (12) which sets the timing and in order to vary the cycle duration via the changed stroke length of the rack (12) in accordance with the machined cam shape.

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10 5. The erasing and cleaning apparatus as claimed in claim 1, characterized in that the braking device (23 to 28) is configured as a disk brake mounted on a bearing element (3) in the side wall (1) for the clean cloth roll.

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6. The erasing and cleaning apparatus as claimed in one of the preceding claims 1 to 5, characterized in that the cam control system (13, 14), that is to say the system for setting the variable length of the cycle stroke of the linear drive (5), with the system for setting the variable braking device (23 to 28) are coupled to one another.

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25 7. The erasing and cleaning apparatus as claimed in claims 1 to 6, characterized in that an axle (28) is assigned in the side wall (1) of the rack (17) which drives the gear wheel chain (18) for displacing the stop cam element (14), on which axle (28) there is arranged a threaded nut (22) having circumferential teeth (21) in which the teeth of a continuation (20) of the gear wheel rod (17) mesh, with the result that the threaded nut (22) can be rotated on the axle (28) against a stop bolt (23) by the linear movement of the gear wheel rod (17), which stop bolt (23), in the state

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in which it is acted on by the threaded nut (22), tilts a brake block (24) arranged behind it on the axle (28) against a brake lining (25) and thus increases the frictional force on the brake lining (25) and, in the state in which it is not loaded by the threaded nut (22), releases the brake block (24) arranged behind it and thus reduces the frictional force on the brake lining (25).

8. The erasing and cleaning apparatus as claimed in claims 6 and 7, characterized in that the braking device in the form of a disk brake comprises a brake disk (26) on the bearing element (3) of the clean cloth roll and a brake lining (27) which is arranged parallel to the former and is fixed in the side wall (1), with the result that the brake lining (25) can be placed against the brake disk (26) by tilting the brake block (24), it being possible in turn to press said brake disk (26) against the brake lining (27).